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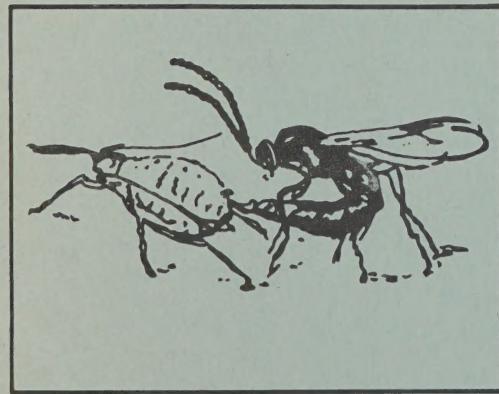
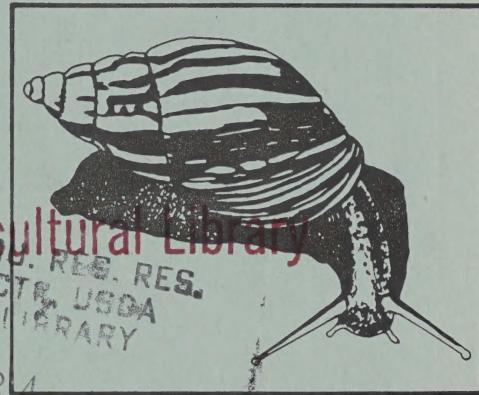
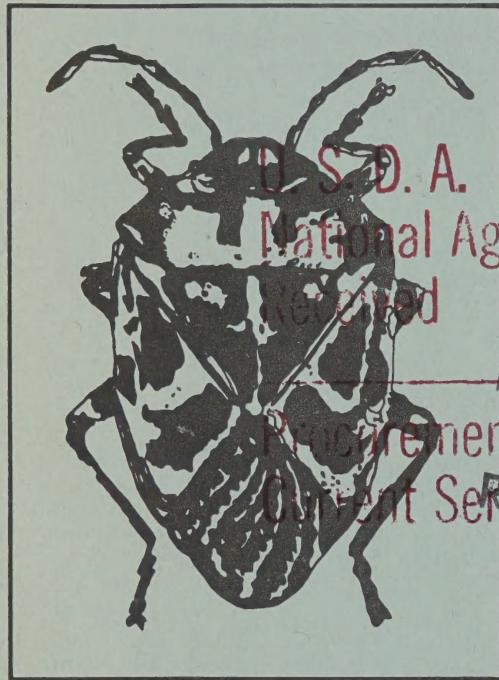
Animal and Plant
Health Inspection
Service

Plant Protection
and Quarantine

Cooperative Plant Pest Report

VOL. 4 INDEX

1979



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

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COOPERATIVE PLANT PEST REPORT

Volume 4

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- 2/ Carried as *Cochliobolus (Helminthosporium) sativus* or *Helminthosporium sativum* in Vol. 4.
- 3/ Carried as anthracnose leaf spot or anthracnose leaf blight in Vol. 4.

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	<i>Citrus</i> red mite <i>Panonychus citri</i>
	<i>Citrus</i> rust mite <i>Phyllocoptrus oleivora</i>
	<i>Citrus</i> snow scale <i>Unaspis citri</i>
	<i>Citrus</i> swallowtail <i>Papilio xuthus</i>
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 40 55 65 73 82 92 104 114 156 182
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Cooley spruce gall adelgid *Adelges cooleyi*
Copitarsia sp. a noctuid moth 185
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Corythucha salicata a tingid bug 715
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Cotton Teafperforator *Bucculatrix thurberiella*
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Cottony cushion scale *Icerya purchasi*
Cranberry girdler *Chrysoteuchia topiaria*
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Crioceris asparagi asparagus beetle 258 339 345 491 499
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Cylindrocopturus adspersus a weevil 546
Cynthia cardui painted lady 192
Cystiphora schmidti a cecidomyiid midge 318

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Cardoon Cynara cardunculus
Carduus nutans musk thistle 318 389 408 549
Carduus tenuiflorus slenderflower thistle 403 412
Centaurea repens Russian knapweed 56
Chondrilla juncea rush skeletonweed 316
Cirsium arvense Canada thistle 828 850
Cirsium crassicaule a thistle 392

1/ Carried as Cuerna lateralis in Vol. 4.

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Cynara cardunculus cardoon 523

D

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Diaporthe (Phomopsis) phaseolorum f.sp. sojae soybean pod and stem blight 168 654 710 726 745 781 800
Diplodia maydis diplodia stalk rot 3 121 649 771 772
Diptodia stalk rot Diplodia maydis
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Dutch elm disease Ceratocystis ulmi

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Dactynotus russellae 20
Dacus sp. a tephritid fly 829
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Dacus dorsalis oriental fruit fly 85 348 666
Darksided cutworm Euxoa messoria
Dasineura gleditchiae a cecidomyiid midge 20 271 287 549 551 822 826
Datana integerrima walnut caterpillar 548 637
Dectes texanus texanus a cerambycid beetle 173
Deilephila nerii oleander hawk moth 498
Deltacephalus sonorus a leafhopper
Dendroctonus brevicomis western pine beetle 267
Dendroctonus frontalis southern pine beetle 259 262 265-266 677 750 761 821
Dendroctonus ponderosae mountain pine beetle 267

Dendroctonus pseudotsugae Douglas-fir beetle 267
Dendroctonus rufipennis spruce beetle 267
Dermacentor albipictus winter tick 21 843
Dermacentor variabilis American dog tick 156 208 388
Dermatophagoides pteronyssinus European house dust mite 843 848
Dermestes peruvianus a dermestid beetle 287 290
Devastating grasshopper *Melanoplus devastator*
Diabrotica spp. corn rootworms 134 253 276 440 460-461 482 510 534 560 581 626 652 688 743 795-796 835-836
Diabrotica balteata banded cucumber beetle 29 34 812 827
Diabrotica longicornis northern corn rootworm 71 75 134 135 136 482 510 534 581 626 652 670 671 743 795-796 835
Diabrotica tibialis a chrysomelid beetle 31 34
Diabrotica undecimpunctata howardi southern corn rootworm 29 31 35 72 93 111 116 174 308 634 674 714 818
Diabrotica virgifera western corn rootworm 3 11 79 83 134 135 136 440 482 499 510 534 560-561 581 606 626-627 641 652 743 758 763 795-796 797 812 828 835-836 835 836 850
Dialeurodes citri citrus whitefly 469
Dialeurodes kirkaldyi Kirkaldy whitefly 21 115 804
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Diaphorina citri a psyllid 415 526
Diaprepes abbreviatus West Indian sugarcane root borer 114 412 434 453 526 643 754
Diarsia rosaria a noctuid moth 249
Diaspidiotus aencylus Putnam scale 454
Diaspidiotus coniferarum a diaspidid scale 7 10
Diaspidiotus liquidambaris 663 802 805 843 849
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Differential grasshopper *Melanoplus differentialis*
Dingy cutworm *Feltia ducens*
Dioryctria zimmermani Zimmerman pine moth 638
Diprion similis introduced pine sawfly 469 732 842 848
Disonycha glabrata a chrysomelid beetle 62 67 812 819 827
Dissosteira carolina Carolina grasshopper 323
Dogwood borer *Synanthedon scitula*
Douglas-fir beetle *Dendroctonus pseudotsugae*
Douglas-fir tussock moth *Orygia pseudotsugata*
Draeculacephala delongi a leafhopper 34
Draeculacephala mollipes watercress sharpshooter 35
Drepanopterna femoratum a grasshopper 321 787
Driedfruit beetle *Carpophilus hemipterus*
Dryocoetes villosus a scolytid beetle 348
scale
Duplaspidiotus fassor, revised page 15 after page 57
Dysaphis plantaginea rosy apple aphid 181 247 259

Dysmicoccus neobrevipes gray pine-
apple mealybug 1/ 64 66
Dysmicoccus pini colus 2/ 7 11

WEEDS

Dalmatian toadflax Linaria dalmatica

E

DISEASES

Eastern gall rust Cronartium quercuum
Entomophthora spp. insect fungi 310
471 485
Entomophthora phytonomi 161 260 310
815 822 826
Ergot Claviceps purpurea
Erwinia spp. bacterial stalk rot 741
a tip rot 191
Erwinia amylovora fire blight 407
Erwinia herbicola bacterial tan spot
167 169 672 679
Erwinia stewarti Stewart's wilt 121
136 297 298 329 331 367 370 397 398
437 479 499 507 558 604 650 686 741
Erwinia tracheiphila cucurbit bacterial
wilt 219 447 696
Erysiphe cichoracearum a powdery
mildew 660 696 784
Erysiphe graminis f.sp. hordei barley
powdery mildew 332
Erysiphe graminis f.sp. tritici wheat
powdery mildew 139 140 229 254 277
299 353 375 401 441 484 536 583 607
Erysiphe polygoni legume powdery
mildew 191
European foulbrood Achromobacter
eurydice
Exserohilum turcicum, see Setos-
phaeria (Exserohilum) turcica

INSECTS

Earias fabia a noctuid moth 36
Ear tick Otobius megnini
Eastern subterranean termite Reticu-
litermes flavipes
Eastern tent caterpillar Malacosoma
americanum

1/ Carried as a mealybug in Vol. 4.

2/ Carried as McKenzie pine mealybug
in Vol. 4.

Eggplant fruit borer Leucinodes
orbonalis
Egyptian alfalfa weevil Hypera
brunneipennis
Eight-spotted forester Alypia octoma-
culata
Elasmotomus v-album a lygaeid bug 66
Elasmopalpus lignosellus lesser corn-
stalk borer 144 174 218 336 465 488
509 590 612 633 634 658 693 777
Elm leaf beetle Pyrrhalta luteola
Elm spanworm Ennomos subsignarius
Ematurga amitaria a geometrid moth
249
Empoasca fabae potato leafhopper 160
166-167 173 215 257 265 283 306 336
382-383 385 404 424 443-444 447 463
465 467 486 489 491 513-514 538 544
564 591 658 674 690 709
Endopiza viteana grape berry moth 249
469
English grain aphid Macrosiphum
avenae
Ennomos subsignarius elm spanworm 341
548
Epargyreus clarus silverspotted
skipper 172 673
Epeorus albicostalis a pyralid moth
392
Epicaerus cognatus potato weevil 1/
36
Epicauta pestifera margined blister
beetle 213
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Epilachna nigrocineta a coccinellid
beetle 12
Epilachna varivestis Mexican bean
beetle 172-173 216 307-308 338-339
356 404 446 447 465 521 544 589 591
631-632 636 657 673 693 713 728 747
759 815-816
Epinotia aporema an olethreutid moth
57 85
Epitrimerus pseudotsugae an eriophyid
mite 7 10
Epitrix cucumeris potato flea beetle
385
Epitrix hirtipennis tobacco flea
beetle 190 241 384 679
Ergates sp. a cerambycid beetle 185
Eriborus terebrans an ichneumonid
wasp 123
Eriophyes n.sp. an eriophyid mite 523
Eriophyes calibaccharis 10

1/ Carried as a weevil in Vol. 4.

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Eriophyes solipini 362
Eriophyes tulipae wheat curl mite 141
142 147 152 178 796 798
Eriophyes vaga an eriophyid mite 523
Eriosoma lanigerum woolly apple aphid
841
Eritettix sp. a grasshopper 65 208
Erythroneura comes a leafhopper 250
750
Esenbeckia incisuralis a tabanid fly
850
Estigmene acrea saltmarsh caterpillar
285. Light traps: 33 55 65 74 92 106
117 158 184 211 242 263 290 314 346-
347 363 393 413 433 455 473 500 524
552 572 598 619 664-665 680 702 719
734 764 825
Ethmia colonella kou leafworm 55
Eucelatoria armigera a tachinid fly
157
Euethela humilis rugiceps sugarcane
beetle 137 276 298 307 330 398
Euides vanduzeei a delphacid plant-
hopper
Eulythis diversilineata grapevine
Tooper 249
Euphoria sepulchralis a scarab 177
Eupithecia sp. a geometrid moth 292
European chafer *Rhizotrogus majalis*
European cherry fruit fly *Rhagoletis*
cerasi
European corn borer *Ostrinia nubila-*
lis
European crane fly *Tipula paludosa*
European earwig *Forficula auricularia*
European fruit scale *Quadrastrioidotus*
ostreaeformis
European grain moth *Nemapogon*
granaella
European hornet *Vespa crabro* *germana*
European house dust mite *Dermato-*
phagoides pteronyssinus
European pine sawfly *Neodiprion*
sertifer
European pine shoot moth *Rhyacionia*
buoliana
European red mite *Panonychus ulmi*
Eurycooccus jessica a mealybug 21
Euscepes postfasciatus West Indian
sweetpotato weevil 42
Euschistus servus brown stink bug 658
673 693 714 748 760
Eutetranychus banksi Texas citrus
mite 804
Euxoa auxiliaris army cutworm 79 100
101 111 112 144 152 154 178 180 202

230 254 298 301 384 725 758 836.
Light traps: 211 242 291 346 363 393
413 433 455 473 524 664 702 719 753
764 789
Euxoa detersa a noctuid moth 1/ 298
330 460
Euxoa messoria darksided cutworm 130
131 172 192 330 446
Euxoa ochrogaster redbacked cutworm
192 193 338
Euxoa tessellata striped cutworm 131
192
Exitianus exitiosus gray lawn leaf-
hopper 30 34
Exitianus picatus 53
Exorista japonica a tachinid fly 318

WEEDS

Enydra martima a composite revised
page 15 after page 57

F

DISEASES

Fire blight *Erwinia amylovora*
Fomes annosus conifer root and heart
rot 266 268
Frogeye Leaf spot *Cercospora sojina*
Fusarium spp. a crown rot 537 563 584
a dry bean root rot revised page
490 after page 553 744
an ear rot 771
a fusarium crown rot 229
fusarium root and collar rot complex
586
fusarium root and crown root complex
423
fusarium root rots 367
leaf spots 401
scab 141 377 401 441 485 536 584 608
stalk rots 121 769 771 773
a winter kill complex 401
Fusarium spp. and *Helminthosporium*
sativum dryland root and foot rot
177
Fusarium head blight *Gibberella*
(*Fusarium*) *moniliforme*
Fusarium sp. and *Helminthosporium* sp.
dryland root and foot rot 277 376
Fusarium kernel rot *Gibberella*
(*Fusarium*) *moniliforme*

1/ Carried as sandhill cutworm in
part in Vol. 4

Fusarium lateritium f.sp. pini pitch
 canker 266
Fusarium moniliforme, see Gibberella
 (Fusarium) moniliforme
Fusarium oxysporum f.sp. lycopersici
 tomato wilt 213
Fusarium roseum f.sp. cerealis, see
Gibberella (Fusarium) roseum f.sp.
cerealis
Fusarium solani f.sp. cucurbitae
 cucurbit root rot 219
Fusarium solani f.sp. pisi a pea root
 rot 467 revised page 490 after
 page 553
Fusiform rust Cronartium fusiforme

INSECTS

Face fly Musca autumnalis
Fall armyworm Spodoptera frugiperda
Fall cankerworm Alsophila pometaria
Fall webworm Hyphantria cunea
False celery Teaftier Udea profundalis
False codling moth Cryptophlebia leucotreta
Faronta diffusa wheat head armyworm
 Light traps: 211 242 291 346 363 393
 413 433 473 500 524 572 598 664 680
 702 719 753 764
Feltia ducens dingy cutworm 130 131
 132 298 330 352 370 383 385 398 424
Feltia subterranea granulate cutworm
 174 205 748. Light traps: 8 65 106
 117 158 184 211 242 263 291 314 346
 363 393 413 455 473 500 524 552 572
 598 619 642 664 680 702 719 734 753
 764 789 805 825
Fenusia pusilla birch leafminer 316
Fern scale Pinnaspis aspidistrae
Filbert bud mite Phytocoptella avellanae
Filbertworm Melissopus latiferreanus
Fiorinia pinicola a diaspidid scale
 42
Fiorinia theae tea scale 64 67
Forcipomyia indecora a ceratopogonid
 fly 1/ 40
Forda formicaria an aphid 21
Forest tent caterpillar Malacosoma disstria
Forficula auricularia European earwig
 182 842 849

1/ Carried as Forcipomyia ingrami in
 Vol. 4.

Formica pallidefulva pallidefulva
 an ant 105 262
Formosan subterranean termite Coptotermes formosanus
Frankliniella spp. 306 337 384
Frankliniella brevicaulis 16
Frankliniella fusca tobacco thrips
 306 337 357 405 518
Frankliniella occidentalis western
 flower thrips 90 207 344 547
Frankliniella schultzei 21
Fruittree Leafroller Archips argyros-pilus
Fumibotys fumalis a pyralid moth 193
 567 801

G

DISEASES

Gaeumannomyces graminis f.sp. tritici
 take-all 139 141 332 353 376 422 484
 511 536 583 607 812 826
Gibberella spp. ear rot 771
 stalk rots 771 773
Gibberella (Fusarium) spp. stalk rots
 793 833
Gibberella (Fusarium) moniliforme
 fusarium head blight 723 740 757
 fusarium kernel rot 3 757
 fusarium stalk rot 3
Gibberella (Fusarium) roseum f.sp.
cerealis gibberella stalk rot 3 121
 757 793 809
 red ear rot 3 740 757 809
Gibberella stalk rot Gibberella
 (Fusarium) roseum f.sp. cerealis
Globodera rostochiensis golden nematode 790
Gloeocercospora sorghi zonate leaf
 spot 3 10 623
Golden nematode Globodera rostochiensis
Goss's wilt Corynebacterium nebraskense
Greasy spot Mycosphaerella citri
Gremmeniella abietina sclerotioridis
 canker "Great Lakes & European
 strains" 266
Gymnosporangium globosum cedar-hawthorn rust 308
Gymnosporangium juniperi-virginianae
 cedar-apple rust 237 244 308 359

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Gahaniola phragmites a eurytomid 434
Galltobelgicus saevus a reduviid bug 16
Garden webworm Loxostege rontalis
Gerstaeckeria sp. a weevil 94
Giraudiella Inclusa a cecidomyiid midge 243
Glassy cutworm Crymodes devastator
Glena cognataria a geometrid moth 249
Glischrochilus quadrisignatus a nitidulid beetle 21
Gloomy scale Melanaspis tenebricosa
Goldenglow aphid Dactynotus rudbeckiae
Granulate cutworm Feltia subterranea
Grape berry moth Endopiza viteana
Grape blossom midge Contarinia johnsoni
Grape cane gallmaker Ampeloglypterus sesostris
Grape colaspis Colaspis brunnea
Grape mealybug Pseudococcus maritimus
Grape root borer Vitacea polistiformis
Grapewine looper Eulythis diversilineata
Graphognathus spp. whitefringed beetles 632 673 708 713 728 747
Graphognathus fecundus 641 776 788
Graphognathus peregrinus 632 641
Grapholita sp. an olethreutid moth 806
Grapholita molesta oriental fruit moth 237 259 286 309 785
Grapholita prunivora lesser apple-worm 340
Grasshoppers 33 65 104 114 138 167
174 182 190 208 240 261 288-289 312
318 320-323 343-344 356 361-362 380
390 399 411-412 423 424 426 429-431
445 452 464 465 470-472 495-497 499
514 521-522 550 570-571 586 596 617
634 640-641 654 659 662 678 689 690
699 717 724-725 730 751 752 762 780
787 804 823 845-846
Gray lawn leafhopper Exitianus exitiosus
Gray pineapple mealbug Dysmicoccus neobrevipes
Greedy scale Hemiberlesia rapax
Green cloverworm Plathypena scabra
Green June beetle Cotinis nitida
Green peach aphid Myzus persicae
Green stink bug Acrosternum hilare
Greenbug Schizaphis graminum

Greenhouse whitefly Trialeurodes vaporariorum
Griburius Tecontei a chrysomelid beetle 115
Gulf Coast tick Amblyomma maculatum
Gymnaspis aechmeae a diaspidid scale 72 75 81 83 427 432
Gyponana germari a leafhopper 16 104
Gypsy moth Lymantria dispar

SLUGS & SNAILS

Giant African snail Achatina fulica

H

DISEASES

Halo blight Pseudomonas coronafaciens
Head smut Spacelotheca reiliana
Helicotylenchus sp. a spiral nematode 102 257 284 358 661
Helminthosporium spp. crown rot 229
a dryland root and foot rot 584
helminthosporium blight 686
a leaf blotch 377
seedling blights 140
a winter kill complex 401
Helminthosporium avenae, see Pyrenophaora (Drechslera) chaetomoides
Helminthosporium carbonum, see Cochliobolus (Bipolaris) carbonum
Helminthosporium leaf spot Cochliobolus (Bipolaris) carbonum
Helminthosporium maydis, see Cochliobolus (Bipolaris) heterostrophus
Helminthosporium sativum, see Cochliobolus (Bipolaris) sativus
Helminthosporium turcicum, see Setosphaeria (Exserohilum) turcica
Hemicyctiophora sp. a sheath nematode 379
Heterodera sp. 257 284
Heterodera amaranthi 112 115
Heterodera glycines soybean cyst nematode 5 10 19 62 67 169 517 656
692 701 728 733 784 788 800 817 826
Heterodera mani 16
Heterodera oryzae 806
Holcus spot Pseudomonas syringae
Hoplolaimus sp. a lance nematode 257 284 403
Hypoxylon atropunctatum a hypoxylon canker 387

INSECTS

Hadrotettix trifasciatus a grasshopper 787
Haematobia irritans horn fly 7 64 103
114 208 239 260 287 293 310 341-342
360 388 407 427 449 469 493 520 549
568 594 616 638 662 697-698 716 732
751 762 786 802 822 843
Hairy chinch bug Blissus leucopterus hirtus
Haplorthynchites aeneus a weevil 567
Harlequin bug Murgantia histrionica
Harrisina brasiliensis western grapeleaf skeletonizer 731
Hedylepta blackburni coconut leaf-roller 66
Heilipus bioculatus a weevil 474
Heliothis spp. noctuid moths 189
217-218 219 633 672 675-677 694-695
714 730-731 761 785
bollworms 186 187 188 384 405 425
445 446 466 488 517 545-546 566-567
590 613-614 633 635 658 659 674 675
694 695 714 730 761 784
Heliothis virescens tobacco budworm 5
170 186 187 188 189 205 230 284 307
337-338 357 384 405-406 425 446 466
488 517 518 545-546 566-567 613 615-
635 658 659 674-675 694 695 714 730-
731. Light traps: 33 55 65 74 92 106
117 158 184 211 242 263 291 346 363
393 413 433 455 500 524 552 572 598
619 642 664-665 680 702 719 734 753
764 789 805 825
Heliothis zea bollworm, corn earworm, tomato fruitworm 53 63 111 127 128
129 169-170 174 187-188 192 214 227
230 275 298 307 330 351 386 398 405-
406 425 440 445 446 466 481 486 488
517 533 545-546 560 566-567 580 590
605 611 613-615 625 632 634 635 651
656 657 658 659 670 672 674-675 687
690 692 693 694-695 708 713 714 724
729 730-731 743 748 776 784. Light traps: 33 55 65 74 92 106 117 158
184 211 242 263 291 314 346 363 393
413 433 455 473 500 524 552 572 598
619 642 664-665 680 702 719 734 753
764 789 805 825
Hellula rogatalis cabbage webworm 5
66 218
Hemiberlesia lataniae latania scale 91 238 359
Hemiberlesia mccoimi a diaspidid scale 618
Hemiberlesia rapax greedy scale 618
Hemicoelus carinatus an anobiid beetle 21
Hemileuca maia buck moth 360
Hemileuca oliviae range caterpillar 81 156 240 289 325 362 412 431 453
551 663
Hesperocimex coloradensis a cimicid bug 822 827
Hesperotettix sp. a grasshopper 430
Hesperotettix speciosus 471
Hesperotettix viridis 411
Hessian fly Mayetiola destructor
Heterocampa manteo variable oakleaf caterpillar 271
Hibiscus whitefly Pealius hibisci
Hickory shuckworm Laspeyresia caryana
Hippodamia spp. 138 627
Hippodamia convergens convergent lady beetle 91 156 317 388
Hippodamia parenthesis 156
Hippodamia sinuata crotchi 21
Hippodamia tredecimpunctata tibialis thirteenspotted lady beetle 317
Homalodisca coagulata a leafhopper 31 34
Homalodisca insolita 29 34
Homoeosoma sp. a pyralid moth 754
Homoeosoma electellum sunflower moth 80 83 192 489 518 546 635
Honey bee Apis mellifera
Horn fly Haematobia irritans
House fly Musca domestica
Howardia biclavis mining scale 238 241
Hybomitra difficilis a tabanid fly 222
Hybomitra lasiophthalma 222
Hybomitra sodalis 222
Hydroecia immanis a noctuid moth 134
Hydroecia micacea potato stem borer 89 93 133 330 370 392 581 597 827
Hylastes ater a scolytid beetle 57
Hylemya antiqua onion maggot 219 308
Hylemya brassicae cabbage maggot 113 218 308 467
Hylemya platura seedcorn maggot 138 173 352 404 406
Hylobius sp. 553
Hylobius abietis 620
Hylobius pales pales weevil 269 341
Hyturgopinus rufipes native elm bark beetle 91 93 697 701
Hylurgops palliatus a scolytid beetle 292 364 394 501 599
Hymenia perspectalis spotted beet webworm 63 67

Hypera sp. 553
Hypera brunneipennis Egyptian alfalfa weevil 71 80 89 101 112 154 164 204 235 256
Hypera castor 22 83
Hypera meles 235
Hypera nigrirostris lesser clover leaf weevil 304 404
Hypera postica alfalfa weevil 4 7 39 61 67 71 80 89 93 100-101 103 111 153-154 160-164 179-180 203-204 233-235 255-256 260 280-282 288 290 303-304 305 310-311 316 334-335 342 355-356 381-382 389 403-404 423 425 428 443 450 463 472 485-486 537 630 653 690 709 718 744-745 759 780-781 798-799 814-815 816 822 823 838 844
Hypera punctata clover leaf weevil 18 282 799 815
Hyphantria cunea fall webworm 54 56 245 269 270 448 492 593 661 677 715
Hypoderma bovis northern cattle grub 407
Hypoderma lineatum common cattle grub 7 32 822 843
Hypothenemus sp. a scolytid beetle

SLUGS & SNAILS

Helicella caperata a helicid snail 212 501 735
Helicella conspurcata 42 394 501
Helicella cretica 735
Helicella maritima 85
Helicella protea 185 501
Helicella virgata 573
Helix aperta a helicid snail 828
Helix aspersa brown garden snail 265 806

WEEDS

Harmel Peganum harmala
Heartleaf cocklebur Xanthium strumarium
Hypericum perforatum St. Johnswort 318

I

INSECTS

Icerya purchasi cottony cushion scale 248
Ichthyura inclusa poplar tentmaker 271

Icius hartii an attid spider 105
Imported cabbageworm Pieris rapae
Imported longhorned weevil Calomycterus setarius
Incisitermes sp. a termite 474 599
Introduced pine sawfly Diprion similis
Iodes scapularis blacklegged tick 843
Ips cembrae a scolytid beetle 76 94
Ips sexdentatus 754 790
Ips typographus 159 348 681
Irbisia spp. mirid bugs 361 470
Irbisia brachycera 311
Irbisia pacifica 361
Iridomyrmex sp. an ant 76
Isorhinus sp. a weevil 765
Itame sulphurea a geometrid moth 249
Itch mite Sarcophites scabiei
Ixodiphagus texanus an encyrtid wasp 22

J

INSECTS

Japanese beetle Popillia japonica
Juniper webworm Dichomeris marginella

K

DISEASES

Kabatiella zeae corn eyespot 121 506 604 707 724 740 771 795

INSECTS

Keiferia lycopersicella tomato pinworm 92 206 214 392 591 715 825 847
Khapra beetle Trogoderma granarium
Kirkaldy whitefly Dialeurodes kirkaldyi
Klamathweed beetle Chrysolina quadrigemina
Kou Tearworm Ethmia colonella
Kurodaia flammei a biting louse 22
Kuwanaspis linearis a diaspidid scale 16

L

DISEASES

Laminated root and butt rot Poria
weiri
Leaf spot Pseudomonas syringae
Legume powdery mildew Erysiphe
polygoni
Lepto Leaf spot Leptosphaerulina
briosiana
Leptonchus sp. a leptonchid nematode
379
Leptosphaeria (Septoria) avenaria
speckled blotch 375 485 511 628
Leptosphaeria (Septoria) nodorum
septoria glume blotch 139 140 401
Leptosphaerulina briosiana Lepto leaf
spot 153 160 179 232 254 279-280
302 355 423 462 513 562-563 689
Leptotrichila medicaginis yellow leaf
blotch 1/ 160 302 334 355 380 513
563
Leveillula (Oidiopsis) taurica a pow-
dery mildew 19
Lima bean anthracnose Colletotrichum
dematum f.sp. truncata
Loose smut Ustilago tritici

INSECTS

Labops spp. grass bugs 240 319
Labops hesperius 240 361 470
Lachnus salignus an aphid 843 849
Lampides boeticus bean butterfly 94
243
Lamprodema maurum a lygaeid bug 290
Languria mozardi clover stem borer 39
41
Lantana defoliator caterpillar Hypena
strigata
Lantana hispid Uroplata girardi
Lantana lace bug Teleonemia scrupul-
osa
Lantana leaf beetle Octotoma scabri-
pennis
Lantana seed fly Ophiomyia lantanae
Large white butterfly Pieris
brassicae
Lasioptera sp. a cecidomyiid midge 76

1/ Carried as Pseudopeziza jonesii
in Vol. 4.

Lasioptera arundinis 364
Laspeyresia caryana hickory shuckworm
732
Laspeyresia pomonella codling moth
244-245 309 339-340 359 386 407 448
468 491 519 547 568 592 616 636 697
715 731 749 785 801. Light traps:
346 500
Latania scale Hemiberlesia lataniae
Lathrolestes minutus an ichneumonid
wasp 316
Leaffooted bug Leptoglossus phyllopus
Leek moth Acrolepia assectella
Lema trilineata three-lined potato
beetle 111 116 241
Lemphagrus curtus an ichneumonid
wasp 22 316 319 450 494 499 803 805
Leperisinus varius a scolytid beetle
806 851
Lepidosaphes pallida a diaspidid
scale 841 849
Lepidosaphes pistaciae 681
Lepidosaphes rubrovittatus 22
Lepidosaphes ulmi oystershell scale
427
Lepidosaphes vermiculus 16
Leptinotarsa decemlineata Colorado
potato beetle 30 34 62 67 206 213
236 258 285 338 385 406 446 489 591
615 660 696
Leptobyrsa decora a tingid bug 55
Leptocera vagans a sphærocerid fly
698 701
Leptoglossus phyllopus leaffooted
bug 30 31 34 61 67
Leptynoptera sulfurea a psyllid 115
116 209
Lesser appleworm Grapholita pruni-
vora
Lesser clover leaf weevil Hypera
nigrirostris
Lesser cornstalk borer Elasmopalpus
lignosellus
Lesser peachtree borer Synanthedon
pictipes
Leucinodes orbonalis eggplant fruit
borer 57 107
Lilac borer Podosesia syringae
Limnobaris sp. a weevil 94
Limonius californicus sugarbeet wire-
worm 136 191 440
Limothrips denticornis barley thrips
379
Lindingaspis tertiaria a diaspidid scale
107
Liogenys macropelma a scarab 315
Liothrips ocellatus a thrips 93

Liriomyza spp. 66 115 209 358 453 718
 788 804 825 847
Liriomyza sativae vegetable leafminer 9 206 207 215 219 236 345
Lissorhoptrus oryzophilus rice water weevil 144 332
Litchi fruit moth Cryptophlebia ombrodelta
Lithophane latiçinerea a noctuid moth 388 842 850
 Little fire ant Wasmannia auro-punctata
Lobesia botrana an olethreutid moth 620
 Locust borer Megacyllene robiniae
 Locust leafminer Odontota dorsalis
 Lone star tick Amblyomma americanum
Longitarsus jacobaeae a flea beetle 318
Loxagrotis albicosta western bean cutworm 133 217 482 510 581 626 670
Loxostege commixtalis alfalfa webworm 305 336
Loxostege rantalidis garden webworm 1/486. Light traps: 346 393 413 500 517 538 572
Loxostege sticticalis beet webworm Light traps: 413 473 524 680 702
 Lubber grasshopper Brachystola magna
Lydella thompsoni a tachinid fly 758
Lygaeospilus tripunctatus a lygaeid bug 827
Lygaeus belfragei a lygaeid bug 102 105
Lygus spp. lygus bugs 5 90 189 205 236 257 284 306 307 336 338 356 404 464 486 514 538 546 564 586 609 630 654 659 671 690 726 745 781 800 817 839
Lygus elisus pale legume bug 167
Lygus hesperus 167
Lygus Tineolaris tarnished plant bug 90 112 154 181 188 205 247 248 279 284 286 306 336 383 446 466 488 518 591 615 671 817
Lymantria dispar gypsy moth 8 261 265-266 289 312 317 318 323-324 362 431 452 472 497 550 571 596 618 641 662 700 717 751 762 786 824 828 842 846 848
Lysiphlebus testaceipes an aphidiid wasp 103 137 138 145 146 317 428 482 521 534 561 581 617 652 758

SLUGS & SNAILS

Lamellaxis sp. a subulinid snail 643
 WEEDS
Linaria dalmatica Dalmatian toadflax 116
Lycium ferocissimum African boxthorn 56

M

DISEASES

Macrophomina phaseolina charcoal rot 121 167 168 515 586 649 655 727 771 774
 Maize chlorotic mottle virus 71 75
 Maize dwarf mosaic virus 121 329 331 397 419 437-438 459 479 483 499 507 531 559 579 605 623 625 650 670 686-687 771
 Meloidogyne sp. 62 236
Meloidogyne naasi wheat root-knot nematode 701 812 826
Microsphaera diffusa a powdery mildew 588 711 727 746 782
 Milky disease A Bacillus popilliae
Mycosphaerella sp. a fungus 94 456
Mycosphaerella berkeleyii peanut leaf spot 611
Mycosphaerella (Cercospora) cruenta 727
Mycosphaerella citri greasy spot 248
Mycosphaerella platanifolia planetree leaf spot 786

INSECTS

Macalla thyrsalis a pyralid moth 259
Macrocentrus grandii a braconid wasp 605 708 724
Macrodactylus subspinosus rose chafer 412
Macrosiphoniella tanacetaria an aphid 40 41
Macrosiphum avenae English grain aphid 145 146 230 301 332 333 379 512 562 814
Macrosiphum euphorbiae potato aphid 241 489 660 715
Macrosteles fascifrons aster leaf-hopper 141 146 286 308 333 379 386 402 442 462 468

1/ Carried as Achyra rantalis in Vol. 4.

Magdalis gentilis a weevil 22
Magicicada septendecim periodical cicada 360 388
Maize billbug *Sphenophorus maidis*
Malacosoma spp. tent caterpillars 266
Malacosoma americanum eastern tent caterpillar 90 113 208 237 244 245-246 271 340 359 387
Malacosoma californicum western tent caterpillar 102
Malacosoma disstria forest tent caterpillar 266 341 593
Maladera sp. a scarab 681
Mamestra brassicae cabbage moth 12 553
Mamestra configurata bertha armyworm 538 671 749
Manduca sp. a sphingid moth 190
Manduca quinquemaculata tomato hornworm 190 215 591. Light traps: 33 55 65 74 92 106 117 184 211 242 263 346 363 393 413 433 473 524 552 572 598 619 664-665 680 734 764 825
Manduca sexta tobacco hornworm 190 205 307 338 357 406 425 466 489 518. Light traps: 33 55 65 74 92 106 117 184 211 242 263 393 413 433 455 473 500 524 552 572 598 619 642 664-665 680 702 719 734 753 764 825
Maple leafcutter *Paraclemensia acerifoliella*
Maple petiole borer *Caulocampus acericaulis*
Margined blister beetle *Epicauta pestifera*
Maruca testulalis bean pod borer 159 434 599 643 681
Masonaphis lambersi an aphid 54 56
Mayetiola destructor Hessian fly 139 144-155 178 278 378 402 422 585 629 689 725 777 796-797 812-813 836-837
McDaniel spider mite *Tetranychus mcdanieli*
Meadow spittlebug *Philaenus spumarius*
Mecas pergrata a cerambycid beetle 34 788
Mecistocerus sp. a weevil 118
Mediterranean fruit fly *Ceratitis capitata*
Medythia suturalis a striped leaf beetle 95-96
Megacerus eulophus a bruchid beetle 68
Megachile rotundata alfalfa leafcutting bee 317 361 617
Megacyllene robiniae locust borer 493

Megastigmus schimitscheki a torymid wasp 159
Melanaphis sacchari sugarcane aphid 16 119 137
Melanaspis obscura obscure scale 843 850
Melanaspis smilacis a diaspidid scale 32 34
Melanaspis tenax 666 765
Melanaspis tenebricosa gloomy scale 843 850
Melanopleurus belfragei a lygaeid bug 22
Melanoplus spp. 173 261 289 312 320 356 390 411 426 429 430 471 475 497 550 514 571 596 662 717 725 780 804
Melanoplus angustipennis 343 411
Melanoplus bivittatus twostriped grasshopper 167 289 312 321 322 323 343 390-391 411 412 429 430 432 452 465 470 471 472 475 496 497 522 570 571 596 678 700 717 751 787
Melanoplus confusus 390 391 411
Melanoplus dawsoni 596 717
Melanoplus devastator devastating grasshopper 390 452 495 521 596 617 699
Melanoplus differentialis differential grasshopper 33 34 65 67 138 148 182 312 321 322 323 362 390 410 411 412 429 430 452 471 475 496-497 522 550 570 596 634 700 717 724-725 251 787
Melanoplus femur-rubrum redlegged grasshopper 167 323 429 430 452 470 471 475 538 550 571 596 654 700 717 724-725 751 787
Melanoplus foedus 343
Melanoplus gladstoni 787
Melanoplus takinus 321
Melanoplus occidentalis 240 312 321 787
Melanoplus packardii Packard grasshopper 312 321 322 429 452 475 596 678 717 787
Melanoplus sanguinipes migratory grasshopper 182 288 306 312 320 321 322 323 343 344 361 390-391 410 411 429 430 452 470 471 472 475 495 496 497 521 550 596 640 678 699-700 717 733 752 762 787 804 846
Melanoplus turnbulli 700
Melissopus latiferreanus filbertworm 491
Melittia satyriniformis squash vine borer 31 35

Melon fly Dacus cucurbitae
 Melonworm Diaphania hyalinata
 Melophagus ovinus sheep ked 294
 Melormenis antillarum West Indian flatid 847 850
 Mermiria sp. a grasshopper 323 700
 Mermiria maculipennis maculipennis 1/288 321 787
 Meromyza americana wheat stem maggot 145 301 537 689 797 837
 Metamasius sp. a weevil 42 85
 Metamasius callizona 57
 Metator pardalinus a grasshopper 288 321 787
 Meteorus autographae a braconid wasp 283
 Mexican bean beetle Epilachna varivestis
 Mexican black scale Saissetia miranda
 Mexican fruit fly Anastrepha ludens
 Microctonus aethiopoides a braconid wasp 288 345 450 822 844-845 849
 Microlarinus lareynii puncturevine seed weevil 104 105 182 183 843 844
 Migratory grasshopper Melanoplus sanguipes
 Mimoses nubigena a bruchid beetle 115
 Mining scale Howardia biclavis
 Monochamus alternatus a cerambycid beetle 243
 Mormon cricket Anabrus simplex
 Mountain pine beetle Dendroctonus ponderosae
 Mourningcloak butterfly Nymphalis antiopa
 Murgantia histrionica harlequin bug 63 67
 Musca autumnalis face fly 103 260 287 293 310 342 360 388 407 427 449 469 493 549 568 594 638 662 677 698 716 732
 Musca domestica house fly 294
 Mycetaspis apicata a diaspidid scale 16
 Myrmecocystus romainei an ant 82
 Myzocallis agrifolicola an aphid 103 105
 Myzus persicae green peach aphid 71 72 80 102 112 113 155 189 190 205 213 215 219 237 247 284 307 318 357 359 384 386 406 425 446 466 467 489 518 568 591 615 636 659 660 676 840

1/ Carried as Mermiria maculipennis in part in Vol. 4.

SLUGS & SNAILS

Monacha cantiana a helicid snail 264
 Monacha syriaca 553 620

WEEDS

Musk thistle Carduus nutans

N

DISEASES

Nigrospora sp. an ear rot 771
 Nomuraea rileyi an insect fungus 171 283 692 712 729 760
 Northern leaf blight Setosphaeria (Exserohilum) turcica
 Nosema apis nosema disease 449
 Nosema disease Nosema apis
 Nosema pyraustae corn borer protozoan 151 177 183 758
 Nuclear polyhedrosis virus 289

INSECTS

Nantucket pine tip moth Rhyacionia frustrana
 Nasutitermes sp. a termite 315
 Native elm bark beetle Hylurgopinus rufipes
 Navel orangeworm Amyelois transitella
 Nemapogon granella European grain moth 819 827
 Nematus abbotii a tenthredinid sawfly 81 83
 Neoclytus acuminatus redheaded ash borer 64 67
 Neoclytus mucronatus mucronatus a cerambycid beetle 22
 Neodiprion pinetum white pine sawfly 387
 Neodiprion pratti pratti Virginia pine sawfly 469
 Neodiprion sertifer European pine sawfly 286 309 341
 Neophasia menapia pine butterfly 269
 Neophyllaphis podocarpi an aphid 22
 Neoterpes sp. a termite 185
 Nephaspis amnicola a lady beetle 825
 Nephelodes minians bronzed cutworm 148 254 709
 Nesosydney ipomoeicola a leafhopper 78
 Neurocolpus nubilus clouded plant bug 615

Nezara viridula southern green stink
bug 29 30 35 62 67 71 75 206 658 673
693 713 714 729 730 748 760 817
Niphades sp. a weevil 118
Nomia melanderi alkali bee 317
Northern cattle grub Hypoderma bovis
Northern corn rootworm Diabrotica
longicornis
Northern pine weevil Pissodes
approximatus
Northern pitch twig moth Petrova
albicapitana
Nuculaspis californica black pineleaf
scale 341 345 842 849
Nymphalis antiopa mourningcloak
butterfly 360
Nysius coenosulus a lygaeid bug 344

O

DISEASES

Oat black loose smut Ustilago avenae
Oat covered smut Ustilago kolleri
Oat crown rust Puccinia coronata f.sp.
avenae
Oat cyst nematode Bidera avenae
Oat stem rust Puccinia graminis f.sp.
avenae
Oidiopsis taurica, see Leveillula
(Oidiopsis) taurica
Onion white rot Sclerotium cepivorum
Onion yellow dwarf virus 74 75

INSECTS

Oak leaftier Croesia semipurpurana
Obliquebanded leafroller Choristoneura
rosaceana
Obscure root weevil Sciopithes
obscurus
Obscure scale Melanaspis obscura
Octaspidiotus araucariae a diaspidid
scale 17
Octotoma scabripennis lantana leaf
beetle 9
Odonaspis penicillata a diaspidid
scale 22
Odonaspis ruthae 23
Odontota dorsalis locust leafminer
310 697
Oebalus pugnax rice stink bug 29 34
39 41 61 67 89 93 147 230
Oedaleonotus enigma enigma a grass-
hopper 288 343 361 411 470 521 678
699

Oleander hawk moth Deilephila nerii
Oleander scale Aspidirotus nerii
Oligonychus ilicis southern red mite
72 75
Oligonychus milleri a tetranychid
moth 269
Oligonychus pratensis Banks grass
mite 139 582 606 608 627 652 758
Oligonychus ununguis spruce spider
mite 269
Oligotrophus betulae a gall midge 36
Olixon banksii a rhopalosomatid wasp
23
Onion maggot Hylemya antiqua
Onion thrips Thrips tabaci
Ooencyrtus guamensis an encyrtid wasp
289
Operophtera brumata winter moth 6 11
17 23 39 185 244 259 265 271 339 819
821 841 850
Operophtera occidentalis a geometrid
moth 841
Ophiomyia lantanae lantana seed fly 9
Opuntiaspis carinata a diaspidid
scale 17
Orange tortrix Argyrotaenia citrana
Orangestriped oakworm Anisota senatoria
Orchamoplatus mammaeferus a whitefly
9 364 599 790
Orgyia pseudotsugata Douglas-fir
tussock moth 267
Orgyia thyellina a tussock moth 573
Oriental fruit fly Dacus dorsalis
Oriental fruit moth Grapholitha
molesta
Orius sp. an anthocorid bug 627
Orthezia pseudotinsignis an ortheziid
scale 17
Orthosia hibisci a noctuid moth 155
Orthotomicus erosus a scolytid beetle
526
Orthotomicus laricis 735 765
Orthotomicus suturalis 643
Osmia cornifrons an osmia bee 17
Ostrinia nubilalis European corn
borer 119 122 130 144 151 172 177
214 216 227 253 275 297 329 345 351
367-368 385 397-398 406 419-420 438-
439 447 459-460 467 479-480 489 508-
509 531-533 537 559-560 579-580 591
605 615 625 635 636 650-651 660 670
675 676 687 708 724 758 775 793 795
809 810 811 828 833 834-835. Light
traps: 242 291 314 346-347 363 393
413-414 433 455 473 500 524-525 552

572 598 619 642 664-665 680 702 719
734 753 764 789
Otiorhynchus ligustici alfalfa snout
beetle 164
Otiorhynchus ovatus a weevil 1/ 191
Otiorhynchus rugosostriatus 23
Otiorhynchus sulcatus black vine
weevil 191 258 259 338
Otobius megnini ear tick 493 786
Oulema melanopus cereal leaf beetle 8
10 65 208 240 260-261 288 311 316
317 319 342 343 361 389-390 408 428
450 451 470 493-494 499 520 568 569
595 597 678 679 698 699 701 802-803
823 827
Oystershell scale Lepidosaphes ulmi

SLUGS & SNAILS

Otala lactea a helcid snail 474
Otala vermiculata 68 292

P

DISEASES

Paratylenchus sp. a pin nematode 111
151 257 355 661
Pea anthracnose Colletotrichus pisi
Pea bacterial blight Pseudomonas pisi
Pea downy mildew Peronospora viciae
Peach X-Disease virus 519
Peanut leaf rust Puccinia arachidis
Peanut leaf spot Mycosphaerella berkeleyii
Pea root rot Aphanomyces euteiches
Pellicularia koleroga thread blight
841 848 849
Pellicularia (Sclerotium) rorfsii
southern blight 656
Penicillium spp. ear rots 3 771
Peronosclerospora sorghi sorghum
downy mildew 2/ 557 648 834 849
Peronospora manshurica soybean downy
mildew 168 487 515 539-540 565 587-
588 609 630 654 655 672 690-691 710
727 746 782
Peronospora parasitica crucifer downy
mildew 53 63

1/ Carried in error as Otiorhynchus striatus in Vol. 4.

2/ Carried as Sclerospora sorghi in Vol. 4.

Peronospora parasitica crucifer downy
mildew 53 63
Peronospora tabacina blue mold 405
472 518 695 800
Peronospora trifoliorum alfalfa downy
mildew 61 160 232 255 334 355 380
443
Peronospora viciae pea downy mildew
revised page 490 after page 553
Phakopsora pachyrhizi soybean rust
829
Phialophora gregata brown stem rot 58
710 727 746
Phoma medicaginis spring black stem
153 160 179 231 254 279 302 333 354
380 513 563
Phoma oleracea f.sp. helianthi-tubero
sunflower black stem 676 696
Phomopsis sojae, see Diaporthe
(Phomopsis) phaseolorum f.sp. sojae
Phyllachora engleri a fungus 599
Phyllosticta leaf spot Phyllosticta
sojaecola
Phyllosticta sojaecola Phyllosticta
leaf spot 444 487 514 541 564 587
Phyllosticta solitaria apple blotch
697 761
Phyllostictina sp. a fungus 735
Phymatotrichum omnivorum Texas root
rot 186 244
Physoderma maydis corn brown spot 558
578 648 771
Phytophthora infestans potato/tomato
late blight 615
Phytophthora megasperma a phytophthora
root rot 587
Phytophthora megasperma f.sp. sojae
phytophthora rot 167-168 464 486
514 538-539 564 586 609 630 654 746
Phytophthora rot Phytophthora megasperma f.sp. sojae
Pinewood nematode Bursaphelenchus
lignicolus
Pitch canker Fusarium lateritium
f.sp. pini
Planetree leaf spot Mycosphaerella
platanifolia
Plasmopara halstedii sunflower mildew
660
Polymyxa graminis a primitive root
fungus 111
Poria weiri laminated root and butt
rot 267
Potato leaf roll virus 213 215
Potato/tomato late blight Phytophthora
infestans

Potato virus Y 189 190 284 307 337
 357 405
Pratylenchus sp. a lesion nematode 99
 102 111 151 155 236 257 284 355 423
 426 508 810
Pseudomonas andropogoni bacterial
 stripe 507 558 579 623 649-650
 669 686 724 741
Pseudomonas atrofaciens basal glume
 rot 353
Pseudomonas coronafaciens halo blight
 353 377 401 462 485 628-629
Pseudomonas glycinea soybean bacterial
 blight 169 444 465 487 515-516
 541-542 565 588-589 610 630-631 655
 672 691 711 727-728 746 783
Pseudomonas pisi bean brown spot
 blight revised page 490 after page
 553
 holcus spot 459 506-507 551 558 578
 649 669 741 771
 a leaf spot 419
 pea bacterial blight revised page
 490 after page 553
 stone fruit bacterial canker 244
Pseudomonas striafaciens bacterial
 stripe blight 512 536
Pseudomonas tabaci wildfire 516
Pseudopeziza jonesii see *Leptotricha medicaginis*
Pseudopeziza medicaginis common leaf
 spot 160 302 355 380 462 513 563 585
Puccinia sp. a rust 599
Puccinia arachidis peanut leaf rust
 611 693 760
Puccinia cacao 107
Puccinia chondrillina skeletonweed
 rust 316
Puccinia coronata crown rust 276 373
 oat crown rust 461
Puccinia coronata f.sp. *avenae* oat
 crown rust 228 373 400 422 441 461
 483-484 511 535 562 582 607 627 777
Puccinia graminis black stem rust
 311 389 408 450 494 638
Puccinia graminis f.sp. *avenae* oat
 stem rust 239 389 409 428 450 494-
 495 521 549 569-570 594-595 617 638
 639
Puccinia graminis f.sp. *secalis* a
 barley stem rust 638
 rye stem rust 389 409 495 570 639
Puccinia graminis f.sp. *tritici*
 a barley stem rust 408 494 569 594
 638
 wheat stem rust 239 319 389 409 428
 451 495 549-550 570 595 639-640 786

Puccinia helianthi sunflower rust 590
 635 659 695 784
Puccinia hordei barley leaf rust 1/
 228 484 562 582 628
Puccinia melanocephala sugarcane rust
 18 623 624 641
Puccinia polysora southern rust 120
 367 392 647 685 707 723 770 794 805
 833-834 849
Puccinia purpurea sorghum leaf rust
 557 647 723 740
Puccinia recondita f.sp. *hordei*, see
Puccinia hordei
Puccinia recondita f.sp. *secalis* rye
 Teaf rust 299 373 484 562 628
Puccinia recondita f.sp. *tritici*
 wheat Teaf rust 139 228 253 299 331
 353 372-373 399-400 440 461 483 511
 535 561 582 606-607 627 725 777 796
Puccinia sorghi common maize rust 119
 419 505 530 557 577-578 603 623 647
 669 685 686 739-740 757 763 770 793
Puccinia striiformis wheat stripe
 rust 228 353 374 400 441 483
Puccinia tiliandsiae 643
Puccinia urbaniana 620
 Purple stain *Cercospora kikuchii*
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helminthosporium Teaf blotch 2/ 629
Pyrenophora (Drechslera) chaetomoides *helminthosporium* Teaf
 blotch
Pyrenophora (Drechslera) graminea
 barley stripe 353
Pyrenophora (Drechslera) tabacina
 blue mold 337 357
Pyrenophora (Drechslera) trichostoma
 tan spot 141 151 178 228-229 254
 277 300 332 353 376 401 462 511 536
 583 629
Pythium sp. a dry bean root rot
 revised page 490 after page 553
 a winter kill complex 401
Pythium debaryanum a pythium damping-off 167

INSECTS

Pachydissus sp. a cerambycid beetle
 599

1/ Carried as *Puccinia recondita*
 f.sp. *hordei* in part in Vol. 4.

2/ Carried as *Helminthosporium avenae*
 in Vol. 4.

Packard grasshopper Melanoplus packardii
 Painted lady Cynthia cardui
 Paleacrita vernata spring cankerworm 91 103 207 237 239 244 259 269 270 339 360 387
 Pale legume bug Lygus elisus
 Pale western cutworm Agrotis orthogonia
 Pales weevil Hylobius pales
 Palmerworm Dichomeris TiguTella
 Pamphilus amplexus a pamphiliid sawfly 23 83
 Pamphilus sitkensis 81 83 250
 Panaphis Juglandis an aphid 548
 Pandora moth Coloradia pandora
 Panonychus citri citrus red mite 90 821
 Panonychus ulmi European red mite 207 237 247 286 309 387 448 468 492 592 637 661 697
 Papaipema nebris stalk borer 133 276 298 369 398 421 439-440 447 460 482
 Papaya fruit fly Toxotrypana curvicauda
 Papilio xuthus citrus swallowtail 92
 Parabemisia myricae a whitefly 17 54 56 91 93
 Paraclemensia acerifoliella maple leafcutter 716
 Paracoccus landoi a mealybug 851
 Paradoxococcus mcdanieli a soft scale 1/ 241 523
 Paraleyrodes naranjae a whitefly 74 392 453
 Paraleyrodes perseae plumeria whitefly 74 75
 Parandra brunnea a cerambycid beetle 23
 Parasetigena silvestris a tachinid fly 323
 Parlatoria proteus a diaspidid scale 23
 Paromius longulus a lygaeid bug 231
 Pea aphid Acythosiphon pisum
 Pea leaf weevil Sitona lineatus
 Pea weevil Bruchus pisorum
 Peach twig borer Anarsia lineatella
 Peachtree borer Synanthedon exitiosa
 Pealius hibisci hibiscus whitefly 453
 Pear psylla Psylla pyricola
 Pear sawfly Caliroa cerasi
 Pecan nut casebearer Acrobasis nuxvorella

1/ Carried as a mealybug in Vol. 4.

Pecan phylloxera Phylloxera devastatrix
 Pecan spittlebug Clastoptera achatina
 Pecan weevil Curculio caryae
 Pectinophora gossypiella pink bollworm 240 261 312 325 344 362 412 497 522 551 571 597 618 662 679 700 718 733 751 762 787 788 804 824 846
 Pediasia trisecta a pyralid moth 301
 Pediobius sp. a eulophid wasp 339
 Pediobius foveolatus 173 338
 Pegomya hyoscyami spinach leafminer 384
 Pentamerismus erythreus a tenuipalpid spider mite 1/ 269
 Pentahelus major winter grain mite 3 79 100 147 152 202 231 279 838
 Pepper weevil Anthonomus eugenii
 Peridroma saucia variegated cutworm 30 35 133 172 180 188 193 235 236 25 258 282-283 285 301 302 305 330 333 335 382 547 586. Light traps: 33 74 82 92 106 117 158 184 211 242 263 291 314 346-347 363 393 413-414 433 455 473 500 524-525 552 572 598 619 642 664 680 702 719 734 753 764 789 805 847
 Periodical cicada Magicicada septendecim
 Periploca nigra a walshiid moth 616
 Peritrechus fraternus a lygaeid bug 2
 Pero mizon a geometrid moth 286
 Petrobia Tatens brown wheat mite 147 354 442
 Petrova albicapitana northern pitch twig moth 181
 Petrova metallica an olethreutid moth 750 752
 Phaedon sp. a chrysomelid beetle 394
 Phaenomerus sp. a weevil 434
 Phalonia hospes banded sunflower moth 567
 Phantacrus lobatus an eriophyid mite 54 56
 Phenacoccus solani a mealybug 260 262
 Philaenus spumarius meadow spittlebug 4 11 166 181 183 205 238 250 284 336 383 404
 Phlibostroma quadrimaculatum a grasshopper 312 321 390 411 787 846
 Phloeosinus rudis a scolytid beetle 12 526 666
 Phoetaloides nebrascensis a grasshopper 321 411

1/ Carried as a false spider mite in Vol. 4.

<u>Phoracantha semipunctata</u>	a cerambycid beetle	415 501 553	243
<u>Phragmataecia castaneae</u>	a cossid moth	394	
<u>Phthorimaea operculella</u>	potato tuber-worm	696	
<u>Phyllocoptrus oleivora</u>	citrus rust mite	249	
<u>Phyllophaga</u> sp.	a scarab		
<u>Phyllophaga aurea</u>	24		
<u>Phyllotreta cruciferae</u>	a chrysomelid beetle	218	
<u>Phylloxera devastatrix</u>	pecan phylloxera	340	
<u>Phymata pallida</u>	a phymatid bug	81 83	
<u>Phytocoptella avellanae</u>	filbert bud mite	248	
<u>Pickleworm</u> <u>Diaphania nitidalis</u>			
<u>Pieris</u> sp.	a pierid butterfly	36	
<u>Pieris brassicae</u>	large white butterfly	85 364 501	
<u>Pieris protodice</u>	southern cabbageworm	5	
<u>Pieris rapae</u>	imported cabbageworm	181 217 236 240 308 339 358 385 467 519 591-592 696	
<u>Pineapple scale</u> <u>Diaspis bromeliae</u>			
<u>Pine butterfly</u> <u>Neophasia menapia</u>			
<u>Pine needle scale</u> <u>Chionaspis pini-foliae</u>			
<u>Pine tortoise scale</u> <u>Toumeyella parvicornis</u>			
<u>Pink bollworm</u> <u>Pectinophora gossypiella</u>			
<u>Pinnaspis aspidistrae</u>	fern scale	637 641 820 827	
<u>Pissodes</u> sp.	a weevil	315 790	
<u>Pissodes approximatus</u>	northern pine weevil	341	
<u>Pissodes cembrae</u>	a weevil	434 526	
<u>Pissodes notatus</u>	banded pine weevil	526	
<u>Pissodes pini</u>	456		
<u>Pityogenes bidentatus</u>	a scolytid beetle	829	
<u>Pityogenes bistridentatus</u>	36	703	
<u>Pityogenes chalcographus</u>	107	292	
<u>Pityogenes quadridens</u>	620		
<u>Plagiometriona clavata</u>	a chrysomelid beetle	113 116	
<u>Planococcus citri</u>	citrus mealybug	90	
<u>Plathypena scabra</u>	green cloverworm		
170-171 235 283 305 336 382 465 565 586 590 611 633 657 671 672-673 690 692 712 729 748			
<u>Platynota idaealis</u>	a tortricid moth	841	
<u>Platynota stultana</u>		591	
<u>Platypus</u> sp.	a platypodid beetle	243	
<u>Platypus compositus</u>	801 805		
<u>Plecia nearctica</u>	a bibionid fly	287 716	
<u>Plum curculio</u> <u>Conotrachelus nenuphar</u>			
<u>Plumeria</u> whitefly	<u>Paraleyrodes perseae</u>		
<u>Plum rust mite</u> <u>Aculus fockeui</u>			
<u>Plutella xylostella</u>	diamondback moth	5 63 113 155 206 218 308 345 385 426 804 840 847	
<u>Pniortoris modesta</u>	a reduviid bug	73 75	
<u>Podisus placidus</u>	a stink bug	24	
<u>Podosesia syringae</u>	lilac borer	309 310 313	
<u>Pogonocherus fasciculatus</u>	a cerambycid beetle	76	
<u>Polyphagotarsonemus latus</u>	broad mite	74	
<u>Polyphylla decemlineata</u>	tenlined June beetle	246	
<u>Polyraphis</u> sp.	a cerambycid beetle	76	
<u>Popillia japonica</u>	Japanese beetle	114 172 209 224 324 412 424 453 472 497 522 551 597 678	
<u>Poplar tentmaker</u> <u>Ichthyura inclusa</u>			
<u>Potato aphid</u> <u>Macrosiphum euphorbiae</u>			
<u>Potato flea beetle</u> <u>Epitrix cucumeris</u>			
<u>Potato leafhopper</u> <u>Empoasca fabae</u>			
<u>Potato stem borer</u> <u>Hydrocacia micacea</u>			
<u>Potato tuberworm</u> <u>Phthorimaea opercula</u>			
<u>Potato weevil</u> <u>Epicaerus cognatus</u>			
<u>Prays fulvocanellus</u>	an ermine moth	243	
<u>Premnotrypes</u> sp.	a weevil	703	
<u>Procecidochares alani</u>	a tephritid fly	9	
<u>Prociphilus fraxinifolii</u>	an aphid	360	
<u>Prosapia bicincta</u>	twolined spittlebug	629	
<u>Prospaltella opulenta</u>	an aphelinid wasp	1/ 317	
<u>Psammotettix emarginatus</u>	a leafhopper	826	
<u>Pseudalaetia unipuncta</u>	armyworm	53 127 142-143 157 230 254 275 278 283 298 300-301 302 305 330 333 352 354 369 377-378 379 398 402 420-422 439 442 462 481 486 509-510 512 533 536-537 538 560 562 564 567 580 585 586 608 688 689 715 758-759 847. Light traps	
8 33 41 55 65 74 106 117 158 184 211			
1/ Carried as a eulophid wasp in Vol. 4.			

242 263 291 314 346-347 363 393 413-
414 433 455 473 500 524-525 552 572
598 619 642 664-665 680 702 719 734
753 764 789 805 825 847

Pseudaonidia trilobitiformis a diaspidid scale 750 752

Pseudatomoscelis seriatus cotton fleahopper 189 257 425 488 518 546

Pseudaulacaspis cockerelli a diaspidid scale 454

Pseudaulacaspis pentagona white peach scale 247

Pseudococcus citriculus a mealybug 85

Pseudococcus maritimus grape mealybug 247

Pseudolampsis guttata a chrysomelid beetle 24

Pseudopityophthorus minutissimus a scolytid beetle 697

Pseudoplusia includens soybean looper 171 445 488 611 633 657 692 712 729

747 760

Psoloessa sp. a grasshopper 208 288

Psorophora columbiae a mosquito 388

Psylla pyricola pear psylla 6 31 39 53 63 72 90 155 244 246-247 259 387 468 547

Psylliodes picina a chrysomelid beetle 202 210

Pulvinaria ixorae a coccid scale 474

Pulvinaria mesembryanthemi 821 827

Pumpkin beetle Aulacophora abdominalis Puncturevine seed weevil Microlarinus lareynii

Putnam scale Diaspidiotus aenetus

Pyropotus pryeri a scarab 703

Pyrrhalta Tuteola elm leaf beetle 238 270 341 360 448 593

SLUGS & SNAILS

Pallifera costaricensis a philomycid slug 394 553

WEEDS

Parentucellia latifolia a weed 17

Peganum harmala harmel 25

Piptochaetium stipoides f.sp. purpureascens a ricegrass 345

Puncturevine Tribulus terrestris

Q

DISEASES

Quininsulcius sp. a stylet nematode 28

INSECTS

Quadraspisidiotus juglansregiae walnut scale 72 75

Quadraspisidiotus ostreaeformis

European fruit scale 247

Quadraspisidiotus perniciosus San Jose scale 340 637 785

Quadraspisidiotus taxodii a diaspidid scale 448 454 618 638 641

R

DISEASES

Ramulispora sorghi sooty stripe 121

506 558 578 623 649 669 686 724

Red ear rot Gibberella (Fusarium) roseum f.sp. cerealis

Rhabdovirus 53

Rhizoctonia sp. a rhizoctonia crown rot 191

Rhizoctonia root rot Rhizoctonia solani

Rhizoctonia solani rhizoctonia root and stem rot 464

rhizoctonia root rot 547

rhizoctonia rot 487 539

sharp eyespot 353

turf brown patch 354

Rhizopus spp. rhizopus head rots 840 a tip rot 191 676

Rhynchosporium scald Rhynchosporium secalis

Rhynchosporium secalis rhynchosporium scald 353

Rootless corn (cause unknown) 122

Rough spot Ascochyta sorghina

Rye leaf rust Puccinia recondita f.sp. secalis

Rye stem rust Puccinia graminis f.sp. secalis

INSECTS

Rachiplusia ou a noctuid moth 34

Range caterpillar Hemileuca oliviae

Redbacked cutworm Euxoa ochrogaster

Redbanded leafroller Argyrotaenia velutinana
Redheaded ash borer Neoclytus acuminatus
Red imported fire ant Solenopsis invicta
Redlegged grasshopper Melanoplus femur-rubrum
Rednecked peanutworm Stegasta bosqueella
Redtailed tachinia Winthemia quadripustulata
Reticulitermes spp. termites 103 239
Reticulitermes flavipes eastern subterranean termite 114 208 239 294
Rhagium inquisitor a cerambycid beetle 842 848
Rhagoletis berberis a tephritid fly 24
Rhagoletis cerasi European cherry fruit fly 434 754
Rhagoletis cingulata cherry fruit fly 491
Rhagoletis completa walnut husk fly 105 593 637 801 805
Rhagoletis fausta black cherry fruit fly 387
Rhagoletis indifferens western cherry fruit fly 246 340 448 468 568
Rhagoletis pomonella apple maggot 246 468 491 519 592 636 661 715 731 750 785
Rhagoletis striatella a tephritid fly 39 41
Rhantus gutticollis a dytiscid beetle 66
Rhinocyllus conicus a weevil 318 389 408 549 828
Rhizoecus sp. a mealybug 118
Rhizoecus americanus 32
Rhizoecus dianthi 829
Rhizoecus hibisci 6 10
Rhizoecus simplex 207 210
Rhizotrogus majalis European chafer 24 442
Rhodobaenus tredecimpunctatus cocklebur weevil 30 34
Rhopalosiphum maidis corn leaf aphid 71 137 276 371 461 479 482-483 534 561 581 652 670 708-709 724 743 744 776-777 780 798 812 814
Rhopalosiphum padi 3 53 100 145 146 278 301 332 333 379 485 534 562 709 743 744 758 777 779-780 797-798 814 838
Rhyacionia buoliana European pine shoot moth 269 732

Rhyacionia frustrana Nantucket pine tip moth 341
Rhynchites sp. a weevil 364
Rhyncolus porcatus a weevil 573
Rice stink bug Oebalus pugnax
Rice water weevil Lissorhoptrus oryzophilus
Rice weevil Sitophilus oryzae
Rose chafer Macrodactylus subspinosus
Rose scale Aulacaspis rosae
Rosy apple aphid Dysaphis plantaginea

SLUGS & SNAILS

Rumina decollata a snail 93

WEEDS

Rush skeletonweed Chondrilla juncea
Russian knapweed Centaurea repens

S

DISEASES

Scleroterris canker "Great Lakes & European strains" Gremmeniella abietina
Sclerotthora macrospora crazy top 557 723 770 834 848
downy mildew 332 377 536
wheat downy mildew 536
Sclerospora sorghi sorghum downy mildew 79 83 121 557
Sclerotinia dollar spot Sclerotinia homoeocarpa
Sclerotinia homoeocarpa sclerotinia dollar spot 798
Sclerotinia sclerotiorum sclerotinia stem rot 72 659-660 676 695 840
Sclerotinia stem rot Sclerotinia sclerotiorum
Sclerotinia trifoliorum clover sclerotinia wilt 381
Sclerotium cepivorum onion white rot
Sclerotium rolfsii, see Pellicularia (Sclerotium) rolfsii
Septoria spp. a fungus 643
a septoria leaf blotch 583 628
Septoria spp. septoria complex 140 441 484-485 607-608
Septoria cucurbitacearum cucurbit septoria leaf spot 696
Septoria glume blotch Leptosphaeria (Septoria) nodorum

Septoria glycines soybean brown spot	Sphenospora mera a rust 463
168 444 464 487 515 540-541 564 587 609-610 631 654-655 691 710 727 746 782	Spot blotch <u>Cochliobolus (Bipolaris)</u> <u>sativus</u>
Septoria helianthi sunflower leaf spot 659 676 695	Spring black stem <u>Phoma medicaginis</u>
Septoria selenophomoides a fungus	Stalk rots 119
Septoria tritici speckled leaf blotch	Stem nematode <u>Ditylenchus dipsaci</u>
139 140 229 254 277 300 332 353 374- 375 400 441 462 515 536 583 607	Stemphylium <u>botryosum</u> <u>stemphylium</u> leaf blight 1/ 160 280 302 423 537
Setosphaeria (Exserohilum) turcica	Stemphylium leaf blight <u>Stemphylium</u> <u>botryosum</u>
northern leaf blight 1/ 383 557 577 604 648 669 685 686 707 723 739 793	Stewart's wilt <u>Erwinia stewartii</u>
Skeletonweed rust <u>Puccinia chondrillina</u>	Stone fruit bacterial canker <u>Pseudomonas syringae</u>
Shoestring root rot <u>Armillaria mellea</u>	Streptococcus <u>pluton</u> a European foul-brood 288
Smooth-spored bunt <u>Tilletia foetida</u>	Sugarcane rust <u>Puccinia melanocephala</u>
Soil-borne wheat mosaic virus 99 111 139 142 151-152 178 230 585	Sugarcane smut <u>Ustilago scitaminea</u>
Sooty stripe <u>Ramulispora sorghi</u>	Summer black stem and leaf spot <u>Cercospora medicaginis</u>
Sorghum downy mildew <u>Peronosclerospora sorghi</u>	Sunflower black stem <u>Phoma oleracea</u> f.sp. <u>helianthi-tuberosi</u>
Sorghum leaf rust <u>Puccinia purpurea</u>	Sunflower downy mildew <u>Plasmopara halstedii</u>
Sorghum leaf streak <u>Xanthomonas holcicola</u>	Sunflower leaf spot <u>Septoria helianthi</u>
Southern anthracnose <u>Colletotrichum trifolii</u>	Sunflower mildew <u>Plasmopara halstedii</u>
Southern blight <u>Pellicularia (Sclerotium) rolfssii</u>	Sunflower rust <u>Puccinia helianthi</u>
Southern leaf blight <u>Cochliobolus (Bipolaris) heterostrophus</u>	 INSECTS
Southern rust <u>Puccinia polyspora</u>	Saccharosydne <u>saccharivora</u> a fulgoroid planthopper 2/ 99 105
Soybean bacterial blight <u>Pseudomonas glycinea</u>	Saddleback caterpillar <u>Sibine stimulea</u>
Soybean brown spot <u>Septoria glycines</u>	Saissetia <u>miranda</u> Mexican black scale 81 83
Soybean cyst nematode <u>Heterodera glycines</u>	Saltmarsh caterpillar <u>Estigmene acrea</u>
Soybean downy mildew <u>Peronospora manshurica</u>	Saltmarsh mosquito <u>Aedes sollicitans</u>
Soybean mosaic virus 167 169 444-445 487 516 543 565 589 610 631 656	Sanbornia <u>juniperi</u> an aphid 24
Soybean pod and stem blight <u>Diaporthe (Phomopsis) phaseolorum</u> f.sp. <u>sojae</u>	San Jose scale <u>Quadrastriptius perniciosus</u>
Soybean rust <u>Phakopsora pachyrhizi</u>	Saperda <u>carcharias</u> a cerambycid beetle 212 754
Soybean stem canker <u>Diaporthe phaseolorum</u> f.sp. <u>caulivora</u>	Sapyga <u>pumila</u> a sapygid wasp 361
Speckled blotch <u>Leptosphaeria (Septoria) avenaria</u>	Sarcoptes <u>scabiei</u> itch mite 294
Speckled leaf blotch <u>Septoria tritici</u>	Say stink bug <u>Chthonochroa sayi</u>
Sphaelotheca <u>reiliana</u> head smut 120 739	Schistocerca sp. a grasshopper 182 288 362
Sphaerotheca <u>fuliginea</u> a powdery mildew 819 828	Schistocerca <u>americana</u> American grasshopper 31 33 34
1/ Carried as <u>Helminthosporium turcicum</u> in Vol 4.	Schistocerca <u>shoshone</u> 475
	1/ Carried as stemphylium leaf spot in part in Vol. 4.
	2/ Carried as a delphacid plant-hopper in Vol. 4.

Schizaphis graminum greenbug 3 29 53
 61 100 103 137 145 146 148 152 202
 230 276 278 299 317 329 331 332 370-
 371 379 380 399 421 428 482 510 521
 534 561 581 585 606 617 652 688 709
 724 758 777-778 796 797 812 813-814
 837 838
Schizolachnus sp. an aphid 851
Sciopithes obscurus obscure root
 weevil 265
Scirtothrips citri citrus thrips 102
 248
Scolytoplatypus pubescens a scolytid
 beetle 85 104
Scolytus multistriatus smaller
 European elm bark beetle 7 11 91 93
 454 593 597 786 788
Scolytus rugulosus shothole borer 246
Scolytus scolytus a scolytid beetle
 348 364 415
Scolytus sulcifrons a scolytid beetle
 12
 Screwworm *Cochliomyia hominivorax*
Scytodes thoracica a scytodid spider
 105
 Seedcorn beetle *Stenolophus lecontei*
 Seedcorn maggot *Hylemya platura*
Selenaspisidus albus a diaspidid scale
 7 10
Selenomophalus euryae a diaspidid
 scale 243
Semiothisa santaremaria a geometrid
 moth 33
Sericothrips variabilis soybean
 thrips 405
 Sheep biting louse *Bovicola ovis*
 Sheep ked *Melophagus ovinus*
 Shieldbacked pine seedbug *Tetyra*
 bipunctata
 Shothole borer *Scolytus rugulosus*
Sibine stimulea saddleback cater-
 pillar 32 850
 Silverspotted skipper *Epargyreus*
 clarus
Simulium spp. black flies 294
Sipha flava yellow sugarcane aphid
 331 371 836 848
Sirex nitobei a siricid wasp 806
Sitona hispidulus clover root curcu-
 Tio 162
Sitona lineatus pea leaf weevil 206
 216 256 258 358
Sitophilus oryzae rice weevil 54 65
 73 776
 Smaller European elm bark beetle
Scolytus multistriatus

Solenopsis invicta red imported fire
 ant 82 83 114 127 156 345 679 787
 804 846 850
Solenopsis xyloni southern fire ant
 32 35
 Sorghum midge *Contarinia sorghicola*
 Sorghum webworm *Celama sorghiella*
 Southern armyworm *Spodoptera*
 eridania
 Southern cabbageworm *Pieris protodice*
 Southern chinch bug *Blissus insularis*
 Southern corn billbug *Sphenophorus*
callosus
 Southern corn rootworm *Diabrotica*
 undecimpunctata *howardi*
 Southern fire ant *Solenopsis xyloni*
 Southern green stink bug *Nezara*
viridula
 Southern pine beetle *Dendroctonus*
frontalis
 Southern red mite *Oligonychus ilicis*
 Southwestern corn borer *Diatraea*
grandiosella
 Soybean looper *Pseudoplusia includens*
 Soybean thrips *Sericothrips variabi-*
lis
Sphenophorus callosus southern corn
 billbug 136 227 253 276 298
Sphenophorus maidis maize billbug 136
 298
Sphenophorus parvulus bluegrass bill-
 bug 148 422 462 537 585
 Spinach leafminer *Pegomya hyoscyami*
 Spirea aphid *Aphis citricola*
Spissistilus festinus threecornered
 alfalfa hopper 464 586 634 654 671
 690 710 726 745 759 781 800 816 839
Spodoptera eridania southern armyworm
 171 214
Spodoptera exigua beet armyworm 99
 111 160 164 188 205 213-214 217-218
 219 236 337 345 352 562 619 653 657
 690 692 713 728 748 749 759 781 817.
 Light traps: 117 158 184 211 242 263
 291 314 346 363 393 413 433 455 473
 500 524 552 572 598 642 680 702 713
 719 734 753 764 789 805 847
Spodoptera frugiperda fall armyworm
 106 111 127 128 143 192 214 275 298
 330 351-352 370 386 398 420 439 481
 510 517 560 562 567 580 585 606 612
 619 626 633 635 651 658 659 670 671
 688 689 695 708 709 713 714 715 724
 726 743 745 758 835. Light traps: 33
 55 65 74 92 117 184 211 242 263 314

363 393 413 433 455 473 500 524 533
 537 544 552 572 598 619 642 680 702
 719 734 753 764 789 805 825

Spodoptera ornithogalli yellowstriped armyworm 63 67 171 370 405 481 619.
 Light traps: 33 55 65 74 82 92 106
 117 158 184 211 242 263 291 311 346
 363 393 413 433 455 473 500 524 552
 572 598 642 680 702 719 734 753 764
 789 805 825

Spotted alfalfa aphid Theroaphis maculata

Spotted asparagus beetle Crioceris duodecimpunctata

Spotted beet webworm Hymenia perspectalis

Spotted cutworm Amathes c-nigrum

Spring cankerworm Paleacrita vernata

Spruce beetle Dendroctonus rufipennis

Spruce budworm Choristoneura fumiferana

Spruce spider mite Oligonychus ununguis

Squash bug Anasa tristis

Squash vine borer Melittia satyriniformis

Stable fly Stomoxys calcitrans

Stalk borer Papaipema nebris

Stegasta bosquei Tella rednecked peanut-worm 357 424 590 658 693 714

Stenolemus lanipes a reduviid bug 343 345

Stenolophus lecontei seedcorn beetle 258

Stenolophus quinquepustulatus a carabid beetle 24

Stenoma catenifer avocado seed moth 94 456

Stephanitis pyrioides azalea lace bug 7

Stethorus sp. a lady beetle 627

Stibadium spumosum a noctuid moth 62 66 67 192

Stiretrus anchorago a stink bug 32 35

Stobaera bilobata a delphacid plant-hopper 10

Stomoxys calcitrans stable fly 293-294 342 388 407 469 493 594 662 677 698 716 732 751

Strauzia longipennis sunflower maggot 446

Strawberry aphid Chaetosiphon fragae-folii

Strawberry weevil Anthonomus signatus

Striped cucumber beetle Acalymma vittata

Striped cutworm Euxoa tessellata

Sugarbeet root maggot Tetanops myopaeformis

Sugarbeet wireworm Limonius californicus

Sugarcane aphid Melanaphis sacchari

Sugarcane beetle Euetheola humilis rugiceps

Sugarcane borer Diatraea saccharalis

Suleima helianthana sunflower bud moth 192 546

Sunflower beetle Zygogramma exclamationis

Sunflower bud moth Suleima helianthana

Sunflower maggot Strauzia longipennis

Sunflower moth Homoeosoma electellum

Sunflower spittlebug Clastoptera xanthocephala

Sweetpotato hornworm Agrius cingulatus

Sweetpotato leaf beetle Typophorus nigrinus viridicyaneus

Sweetpotato weevil Cylas formicarius elegantulus

Synanthedon exitiosa peachtree borer 237 386 407 519 819

Synanthedon pictipes lesser peachtree borer 237

Synanthedon scitula dogwood borer 359

Syrbula admirabilis a grasshopper 321 787

SLUGS & SNAILS

Succinea horticola a succineid snail 42

WEEDS

Senecio jacobaea tansy ragwort 313 318

Stenderflower thistle Carduus tenuiflorus

St. Johnswort Hypericum perforatum

Striga asiatica witchweed 824

Striga gesnerioides cowpea witchweed 82 84

T

DISEASES

Take-all Gaeumannomyces graminis f.sp. tritici

Tan spot Pyrenophora (Drechslera) trichostoma

Texas root rot Phymatotrichum omnivorum
 Thread blight Pellicularia koleroga
Tilletia foetida smooth-spored bunt
 485 584 608
 Tobacco ringspot virus 169 728
 Tomato ripe rot Colletotrichum phomoides
 Tomato wilt Fusarium oxysporum f.sp. lycopersici
Trichodorus sp. a stubby-root nematode 379 661
Trichothecium spp. rots 3
Tylencholaimellus sp. a leptonchid nematode 379
Tylenchorhynchus sp. a stunt nematode 102 111 151 157 257 284 355 358 379 423 508 661

INSECTS

Tabanus americanus a tabanid fly 223
Tabanus atratus atratus black horse-fly 223 493
 Tabanus calens 223
 Tabanus catenatus 223
 Tabanus cymatophorus 220
 Tabanus fairchildi 223
 Tabanus Tineola 223
 Tabanus marginalis 223
 Tabanus moestus moestus 223
 Tabanus mularis a tabanid fly 493
 Tabanus nigrescens 223
 Tabanus nigripes 223
 Tabanus pumilus 223
 Tabanus quinquevittatus 223
 Tabanus reinwardtii 224
 Tabanus sackeni 224
 Tabanus similis 224
 Tabanus sparus milleri 224
 Tabanus subsimilis subsimilis 224
 Tabanus sulcifrons 224
 Tabanus superjumentarius 224
 Tabanus trimaculatus 224
 Taeniothrips eucharii a thrips 703
 Tanaos sp. a weevil 68
 Taphrorychus sp. a scolytid beetle 36
 Taphrorychus villifrons a scolytid beetle 348 851
 Tarnished plant bug Lygus lineolaris
 Tea scale Fiorinia theae
 Tegonotus acidotus an eriophyid mite 10
 Teleonemia scrupulosa lantana lace bug 55
 Tenlined June beetle Polyphylla decemlineata

Tenspotted lady beetle Coelophora pupillata
Termes panamaensis a termite 85
Tetanops myopaformis sugarbeet root maggot 181 183 191 205 210
 Tetramesa sp. a eurytomid 434 735 754
Tetranychus cinnabarinus Carmine spider mite 82 92 453 679 825
Tetranychus mcdanieli McDaniel spider mite 247 492 637
Tetranychus urticae twospotted spider mite 139 155 174 193 250 338 564 606 652 659 676
Tetrastichus julis a euphorid wasp 65 67 317 319 342 450 493-494 499 520 523 568-569 618 698 802-803 805 823 827
Tetyra bipunctata shieldbacked pine seedbug 73 75
 Texas citrus mite Eutetranychus banksi
 Texas leafcutting ant Atta texana
Therioaphis maculata spotted alfalfa aphid 4 24 30 154 166 241 257 283 317 318 356 444 463 486 586 609 726 745 759 781 799-800 816 828 839
Thirteen-spotted lady beetle Hippodamia tredecimpunctata tibialis
 Thoracaphis fici banyan aphid 212
 Threecornered alfalfa hopper Spisostylus festinus
 Threelineed potato beetle Lema trilineata
 Thrips obscuratus 68 474
 Thrips tabaci onion thrips 40 104 240 519 847
 Thurberia weevil Anthonomus grandis thurberiae
Thymelicus lineola a hesperiid skipper 422
 Thyridopteryx ephemeraformis bagworm 265 359 697
 Tinocallis caryaefoliae black pecan aphid 732
 Tipula paludosa European crane fly 14
 Tobacco budworm Heliothis virescens
 Tobacco flea beetle Epitrix hirtipennis
 Tobacco hornworm Manduca sexta
 Tobacco thrips Frankliniella fusca
 Tomato fruitworm Heliothis zea
 Tomato hornworm Manduca quinquemaculata
 Tomato pinworm Keiferia lycopersicella
 Tomato ripe rot Colletotrichum phomoides

Tomicus piniperda a scolytid beetle 456 829
Toumeyella lirioidendri tuliptree scale 64 67
Toumeyella parvicornis pine tortoise scale 64 67 72 75
Toumeyella pinicola a soft scale 91 93
Toxotrypana curvicauda papaya fruit fly 616
Trachyrhachys kiowa a grasshopper 321 411 846
Tranes sp. a weevil
Trathala flavoorbitalis an ichneumonid wasp 788
Trialeurodes abutilonea bandedwing whitefly 675
Trialeurodes vaporariorum greenhouse whitefly 40 675 825
Trichoplusia ni cabbage looper 5 30 34 80 113 155 171 206 214 217-218 219 236 285 345 358 447 547 592 615 619 636 660 715 747 749 760 761 785. Light traps: 33 55 65 74 82 92 106 117 158 184 211 242 263 291 346 363 393 413 433 455 473 500 524 552 572 598 642 680 702 719 734 753 764 789 805 825
Trigonotylus ruficornis a mirid bug 1/ 30 34
Trionymus caricis a mealybug 24
Trioza tripunctata a psyllid 701
Trisetacus pseudotsugae an eriophyid mite 54 56
Trogoderma granarium khapra beetle 24 348 394 5/3 754
Tropidosteptes amoenus ash plant bug 360
Tropisternus salsamentus a hydrophilid beetle 9 10
Trypodendron domesticum a scolytid beetle 703
Tuliptree scale Toumeyella lirioidendri
Two-lined spittlebug Prosapia bicincta
Twospotted spider mite Tetranychus urticae
Two-striped grasshopper Melanoplus bivittatus
Typhlocyba pomaria white apple leaf-hopper 340 450 592 636
Typophorus nigritus viridicyaneus sweetpotato leaf beetle 35
Tyria jacobaeae cinnabar moth 182 318 594

1/ Carried as a plant bug in Vol. 4.

SLUGS & SNAILS

Theba pisana white garden snail 12

WEEDS

Tansy ragwort Senecio jacobaea
Texas vervain Verbena halei
Tribulus terrestris puncturevine 182

U

DISEASES

Uredo behnichiana a rust 264
Uredo scabies 292
Uromyces aloes aloe rust 18
Uromyces striatus alfalfa rust 1/ 160 563 653 671 689 726 744 780 798
Uromyces viciae-fabae 456
Ustilago avenae oat black loose smut 2/ 377 461 484 577 583 607 628
Ustilago hordei barley covered smut 583
Ustilago kolleri oat covered smut 628
Ustilago maydis common smut 120 419 437 459 479 505-506 529-530 557 577 603 623 647 685-686 707 723 739 757 763 769-770 793
Ustilago nigra barley black loose smut 3/ 400
Ustilago nuda loose smut 4/ 139 229 299 331 377 400 461 511 536 577 583 607 688
Ustilago scitaminea sugarcane smut 18 41 119 120
Ustilago striiformis stripe smut
Ustilago tritici loose smut 229 461

INSECTS

Udea profundalis false celery leaf-tier 191

- 1/ Carried as Uromyces striatus var. medicaginis in part in Vol. 4.
- 2/ Carried as oat loose smut and loose smut in part in Vol. 4.
- 3/ Carried as Ustilago tritici in part in Vol. 4.
- 4/ Carried as barley loose smut in Vol. 4.

Uglynest caterpillar Archips cerasivoranus
Uloma possibly bonzica a tenebrionid beetle 66
Umbonia crassicornis a treehopper 25
Unaspis citri citrus snow scale 248
Urocerus gigas gigas a siricid wasp 264 394 415 501 765
Uroplata girardi lantana hispid 313 498

V

DISEASES

Venturia inaequalis apple scab 237 244 286 309 339 359 386 407 448
Venturia (Pollaccia) populin black poplar shoot blight 842 848
Verticicladella wagenerii black stain root disease 268
Verticillium albo-atrum verticillium wilt 186
Verticillium wilt Verticillium albo-atrum

INSECTS

Variable oakleaf caterpillar Heterocampa manteo
Variegated cutworm Peridroma saucia
Vegetable leafminer Liriomyza sativae
Velataspis dentata a diaspidid scale 801 805
Velvetbean caterpillar Anticarsia gemmatalis
Vespa crabro germana European hornet 827 849
Vespa pensylvanica western yellow-jacket 762-763 823 825 847
Vexans mosquito Aedes vexans
Vinsonia stellifera a coccid scale 415 754 765 829 851
Virginia pine sawfly Neodiprion pratti
Vitacea polistiformis grape root borer 593

SLUGS & SNAILS

Vaginulus occidentalis a veronicellid slug 703
Vaginulus plebeius 18 115 498 499
Veronicella kraussi 159

WEEDS

Velvetleaf Abutilon theophrasti
Verbena halei Texas verbain 1/ 345

W

DISEASES

Wheat downy mildew Sclerotophthora macrospora
Wheat leaf rust Puccinia recondita f.sp. tritici
Wheat powdery mildew Erysiphe graminis f.sp. tritici
Wheat root-knot nematode Meloidogyne naasi
Wheat spindle streak mosaic virus 139 141 485
Wheat stem rust Puccinia graminis f.sp. tritici
Wheat streak mosaic virus 139 141 147 152 178 230 300 332 377 401-402 536 584 743 777 796
Wheat striate mosaic virus, see American wheat striate mosaic virus
Wheat stripe rust Puccinia striiformis
White pine blister rust Cronartium ribicola
Wildfire Pseudomonas tabaci

INSECTS

Walkingstick Diapheromera femorata
Walnut caterpillar Datana integerrima
Walnut husk fly Rhagoletis completa
Walnut scale Quadraspisdiotus juglansregiae
Wasmannia auropunctata little fire ant 703
Watercress sharpshooter Draeculacephala mollipes
Western bean cutworm Loxagrotis albicosta
Western cherry fruit fly Rhagoletis indifferens
Western corn rootworm Diabrotica virgifera
Western flower thrips Frankliniella occidentalis
Western grapeleaf skeletonizer Harrisina brillians

1/ Carried as a vervain in Vol. 4.

Western pine beetle Dendroctonus brevicomis
Western raspberry fruitworm Bythurus bakeri
Western spruce budworm Choristoneura occidentalis
Western tent caterpillar Malacosoma californicum
Western yellowjacket Vespa pensylvanica
West Indian flatid Melormensis antillarum
West Indian sugarcane root borer Diaprepes abbreviatus
West Indian sweetpotato weevil Eusceps postfasciatus
Wheat curl mite Eriophyes tulipae
Wheat head armyworm Faronta diffusa
Wheat stem maggot Meromyza americana
Wheat stem sawfly Cephus cinctus
Wheel bug Arius cristatus
White apple leafhopper Typhlocyba pomaria
White peach scale Pseudaulacaspis pentagona
White pine sawfly Neodiprion pinetum
Winter grain mite Penthaleus major
Winter moth Operophtera brumata
Winter tick Dermacentor albipictus
Woolly apple aphid Eriosoma lanigerum
Woolly whitefly Aleurothrixus floccosus

SLUGS & SNAILS

White garden snail Theba pisana

WEEDS

Witchweed Striga asiatica

X

DISEASES

Xanthomonas alfalfae alfalfa bacterial leaf spot 160 563 653 671 726
Xanthomonas translucens bacterial stripe 584 629
Xanthomonas holcicola sorghum leaf streak 419 459 507 558 579 623 650 669 686 741
Xanthomonas phaseoli bacterial bean blight 660

Xanthomonas phaseoli f.sp. sojense bacterial pustule 168 487 516 542 565 589 610 631 656 691-692 711 728 747 783-784
Xanthomonas translucens xanthomonas bacterial stripe 377 512 584 629
Xanthomonas translucens f.sp. undulosa black chaff 354 377 422
Xiphinema sp. a daggar nematode 111 151 257 284 403 423 508 810

INSECTS

Xanthippus corallipes a grasshopper 288
Xyleborus sp. a scolytid beetle 620
Xyleborus perforans 264
Xyleborus validus 36
Xylocrius agassizi a cerambycid beetle 155
Xylopsocus capucinus a bostrichid beetle 18
Xylosandrus compactus black twig borer 25 732
Xylosandrus crassiusculus a scolytid beetle 237 241 801 805
Xylosandrus germanus 25

WEEDS

Xanthium strumarium heartleaf cocklebur 445

Y

DISEASES

Yellow leaf blotch Leptotrichila medicaginis

INSECTS

Yellowstriped armyworm Spodoptera ornithogalli
Yellow sugarcane aphid Sipha flava

Z

DISEASES

Zonate leaf spot Gloeocercospora sorghi

INSECTS

Zebra caterpillar Ceramica picta

Zetzellia mali a phytoseiid mite 237
Zeuzera sp. a cossid moth 456
Zicca taeniola a coreid bug 663 801
805
Zimmerman pine moth Dioryctria
zimmermani
Zygogramma exclamationis sunflower
beetle 191-192 426 518

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